

WHAT IS CLAIMED IS:

1. An absorption chiller-heater comprising:
  - a first regenerator heated by an exhaust heat;
  - a heat fluid flow path in which a heat fluid having the exhaust heat flows, supplying the exhaust heat to said first regenerator;
  - a flow path open/close device provided on said heat fluid flow path for opening and closing the heat fluid flow path, thereby switching the heat fluid to flow or to be cut off to said first regenerator;
  - a second regenerator heated by a combustion heat;
  - a burner having a variable combustion amount, supplying the combustion heat to said second regenerator;
  - a first temperature detector for detecting a temperature of said first regenerator or said second regenerator;
  - a heat medium temperature detector for detecting a temperature of a heat medium output from an evaporator; and
  - a controller for controlling to operate said flow path open/close device and said burner;
- wherein said controller sets the temperature detected by said first regenerator temperature detector to be a regenerator temperature, and
- said controller controls at least one of operations to open and close said flow path open/close device and to increase and reduce the combustion amount of said burner in accordance

with the temperature of the heat medium detected by said heat medium temperature detector and the regenerator temperature.

2. The absorption chiller-heater according to Claim 1, wherein said first regenerator temperature detector detects a temperature of said first regenerator and a second regenerator temperature detector detects a temperature of said second regenerator,

said controller sets a higher one of either temperatures of said first and second regenerators to be the regenerator temperature, and

said controller controls at least one of operations to open and close said flow path open/close device and to increase and reduce the combustion amount of said burner in accordance with the temperature of the heat medium detected by said heat medium temperature detector and the regenerator temperature.

3. The absorption chiller-heater according to Claim 1, wherein the combustion amount of said burner is variable in steps by a plurality of stages,

said controller determines to open or close said flow path open/close device and the combustion amount of said burner based on a plurality of heat medium set temperatures and the temperature of the heat medium and,

said controller subsequently increases and reduces in

steps the combustion amount of said burner based on a plurality of regenerator set temperatures and the regenerator temperature, whereby a heat input amount to the second regenerator is increased and reduced.

4. The absorption chiller-heater according to Claim 1, wherein the combustion amount of said burner is continuously variable, and

said controller determines to open and close said flow path open/close device and stop to combust or combust said burner based on a plurality of heat medium set temperatures and the temperature of the heat medium, wherein when said burner is combusted, said controller subsequently determines in steps a maximum combustion limit based on a plurality of regenerator set temperature and the regenerator temperature, the maximum combustion limit setting a range of the combustion amount in which the combustion amount is varied in a proportional manner with the temperature of the heat medium, whereby a heat input to said second regenerator is increased and reduced.

5. The absorption chiller-heater according to Claim 3, further comprising a cooling medium temperature detector for detecting a temperature of a cooling medium supplied to an absorber, wherein said controller changes values of the regenerator set temperatures in accordance with the

temperature of the cooling medium detected by said cooling medium temperature detector.

6. The absorption chiller-heater according to Claim 4, further comprising a cooling medium temperature detector for detecting a temperature of a cooling medium supplied to an absorber, wherein said controller changes values of the regenerator set temperatures in accordance with the temperature of the cooling medium detected by said cooling medium temperature detector.